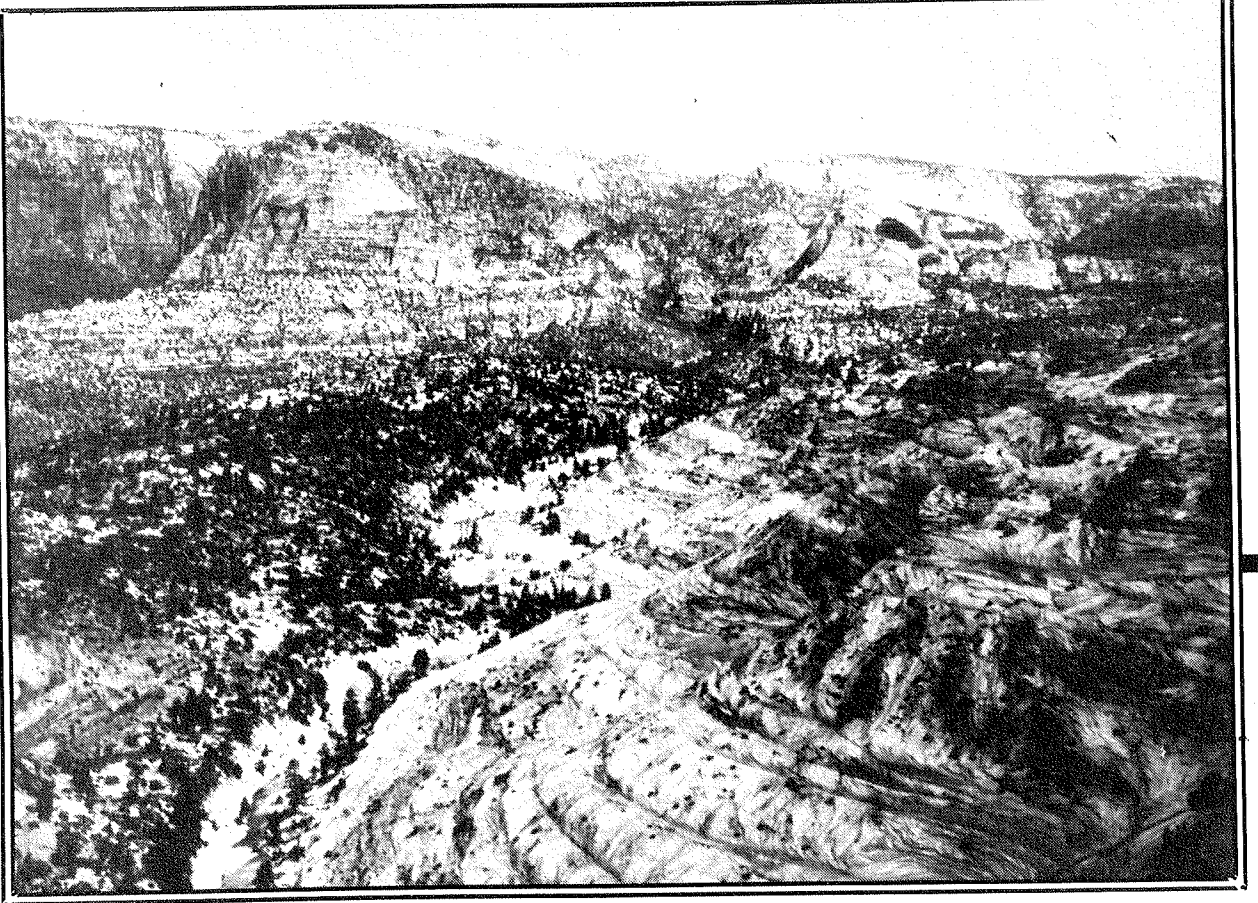


Canaan Mountain WSA



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CANAAN MOUNTAIN WILDERNESS STUDY AREA

1. THE STUDY AREA: 47,170 acres

The Canaan Mountain Wilderness Study Area (WSA) (UT-040-143) is in southeastern Washington County and southwestern Kane County, about 70 miles east of St. George, Utah (population 11,350). About 42,858 acres are in Washington County and 4,312 acres are in Kane County. The WSA is 10 miles from north to south and 10 miles from east to west (see Map).

It borders the Bureau of Land Management (BLM) Cottonwood Point Wilderness in northwestern Arizona for about 5 miles along the Arizona state line, and adjoins Zion National Park on the WSA's northeast boundary for about 4 miles. The WSA consists of 47,170 acres of public land administered by BLM and includes five sections (3,249 acres) of State land and one section (640 acres) of split-estate land (Federal surface State minerals).

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA^a

WITHIN WILDERNESS STUDY AREA	ACRES
BLM (surface and subsurface)	47,170
Split-Estate (BLM surface only) ^b	640
In-holdings (State, Private)	3,249
Total	51,059
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within WSA)	33,800
BLM (outside WSA)	0
Split-Estate (within WSA)	0
Split-Estate (outside WSA)	0
Total BLM land recommended for wilderness	34,440
In-holdings (State, private)	1,969
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	13,370
Split-Estate	640
Total BLM land not recommended for wilderness	13,370
In-holdings (State, Private)	1,280

Source: BLM File Data

^a The Appendix is a detailed table of in-holdings and/or split-estate tracts included within the portion of the WSA recommended for designation.

^b In this report, split-estate lands are defined as only those lands with Federal surface and non-Federal subsurface (minerals). Lands that have Federal minerals but non-Federal surface are classified according to the owner of the surface.

CANAAN MOUNTAIN WILDERNESS STUDY AREA

No private land is in the WSA. Three sections (1,969 acres) of State land are in the portion recommended for wilderness (see Table 1). The split-estate land is not within the recommended wilderness portion. The study area is bordered by public (BLM), State, National Park Service (NPS), and private lands, and a road along part of the eastern boundary.

The WSA is in the Vermilion Cliffs portion of the Grand Staircase, a series of terraces and colored cliffs at the southern edge of the High Plateaus Section of the Colorado Plateau Physiographic Province. Canaan Mountain, a sheer plateau that rises 2,000 feet above surrounding land to an elevation of 7,340 feet, is the dominant feature of the WSA. Within the WSA are shallow lakes, springs, and 4 miles of perennial streams, 3 miles of which are in the portion recommended for wilderness. Most of the surface of the WSA is rock and bare soil; vegetation covers only about 20 percent of the WSA. Ponderosa pine-mountain shrub is the dominant vegetative type, occupying about 75 percent of the vegetated portion of the WSA. Pinon-juniper woodland covers approximately 19 percent, and sagebrush and riparian plants occupy the remainder of the vegetated portion of the study area.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Three alternatives were analyzed in the EIS: a partial wilderness alternative where 33,800 acres would be designated as wilderness and 13,370 acres would be released for uses other than wilderness, which is the recommendation in this report; a no wilderness (no action) alternative; and an all wilderness alternative.

2. RECOMMENDATION AND RATIONALE:

- 33,800 acres
(recommended for wilderness)
- 13,370 acres
(recommended for nonwilderness)

The recommendation for this WSA is to designate 33,800 acres as wilderness. The remaining 13,370 acres would be released for uses other than wilderness. Designation of the entire area as wilderness is considered to be the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The alternative selected, however, would be implemented in a manner which would utilize all practical means to avoid or minimize environmental impacts.

The objectives of recommending the partial alternative of 33,800 acres are to avoid conflicts with rangeland, wildlife and municipal water improvements, and water developments while preserving the best wilderness values. Those portions of the WSA with outstanding opportunities for solitude, primitive recreation, and special features would be included where possible within a manageable wilderness boundary. The boundary of the recommended portion is mostly at the base of the highest and most rugged terrain, and excludes two sections of State land and the split estate land (see Map). Most of the WSA is closed to off-highway vehicle (OHV) use, but much of the recommended portion is too rugged for such activity.

Much of the land not recommended for wilderness designation, such as Areas A, B, and C, lack a diversity of terrain and vegetation and the consequent outstanding opportunities for solitude and primitive recreation. Areas A and E have good potential for projects to improve wildlife habitat, woodland harvest, and nonprimitive recreation. Area B is geographically congruent with the Arizona lands released along the east boundary of the Cottonwood Point Wilderness. Area C is critical to meeting the water supply and recreation needs of the communities of Hildale and Colorado City. Area D includes the developed springs, water rights, and right-of-way associated with the natural springline below the rim of the Canaan Mountain and is critical to meeting the water supply needs of the private Canaan Ranch northwest of Hildale.

CANAAN MOUNTAIN WILDERNESS STUDY AREA

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable. Canaan Mountain is the largest undisturbed plateau top or tableland remaining in southwestern Utah. It possesses a quality of remoteness and naturalness not found elsewhere in the immediate region. The WSA is in a natural condition with minor exceptions. Imprints of past human activity include vehicular tracks on Canaan Mountain and in the main channel of Cottonwood Canyon, a house trailer, fences, several spring developments, reservoirs, 4 miles of ways, and remnants of a sawmill operation. These imprints combined affect 470 acres, or about 1 percent of the WSA. A baseball field with access road, wooden booths, and restrooms are on a Recreation and Public Purposes Act lease that has been cherry-stemmed from the WSA. Approximately 2 acres of disturbance resulting from feasibility and archaeological studies for the once proposed South Creek Reservoir have been rehabilitated.

B. Solitude

The WSA affords outstanding opportunities for solitude on 37,000 acres, 78 percent of the study area, due to topographic screening and, in some locations, a combination of topographic and vegetative screening. All of the portion recommended for wilderness designation easily meets the criteria for outstanding opportunities for solitude.

The summit of Canaan Mountain is a large, rough sandstone area that gives the visitor a feeling of isolation. Slotted walls of the Vermilion Cliffs and talus slopes at the base of the cliffs also provide for solitude. Several deep, narrow and thickly vegetated canyons that penetrate the plateau provide seclusion. Although the sights and sounds of human activity can be observed from some of the rims, an "island in the

sky" perception diminishes their distraction.

The remaining 10,170 acres of the WSA, all of which are in the 13,370 acre area not recommended for wilderness, lack such outstanding opportunities for solitude.

C. Primitive and Unconfined Recreation

About 28,000 acres, or 59 percent of the WSA, provide outstanding opportunities for hiking, backpacking, horseback riding, rock climbing, photography, bird watching, and sightseeing. All of the outstanding opportunities for primitive recreation are within the portion recommended for wilderness and constitute about 83 percent of the recommended area.

Areas suitable for backpacking are the most extensive, but backpacking is nevertheless limited to canyon and plateau top areas because of the rugged terrain. Cottonwood Canyon in the Cottonwood Point Wilderness is a major access to the plateau tops of the southeastern portion of the WSA. Horseback riding is more limited because some locations are passable only on foot.

Scenic quality is considered to be outstanding throughout the WSA, and is a main objective of hiking. About 36,000 acres exhibit exceptional scenic features. Among the scenic features that make the WSA outstanding are the Vermilion Cliffs and fractured, towering cliffs of Canaan Mountain; large expanses of slickrock; waterfalls; abrupt rock rims with superb views of Zion National Park and the Arizona strip south of the WSA; and sandy sagebrush parks with scattered groves of ponderosa pine and aspen.

D. Special Features

Scenery similar to that of Zion National Park and Cottonwood Point Wilderness is a significant characteristic of the WSA. An important difference, however, is that the summit of Canaan Mountain is an essentially intact expanse, unlike the smaller, separated plateau remnants in Zion National Park. There are waterfalls on perennial streams in deep, narrow canyons. The edges of Canaan Mountain

CANAAN MOUNTAIN WILDERNESS STUDY AREA

are finger-like projections that fall away abruptly; in the vicinity of The Pines, the rim of Canaan Mountain is a spectacular 1,400-foot wall.

A lumbering operation that existed on Canaan Mountain from 1915 to 1928 has significant local historical value. A windlass and pulley system on the south edge of the mountain was used to lift men, equipment, and supplies 2,000 feet to the top of Canaan Mountain. As many as 25 men were employed. Logs as large as 4 feet in diameter were harvested, and several million board feet of lumber may have been cut and removed. The operation extended only 2 to 3 miles from the sawmill because of the difficulty of access from one area on the Mountain to another and because of the primitive means of transport. The logging operation ceased in 1928 with the removal of the sawmill. Deteriorating portions of the cable and windlass and a few sawed slabs, a small building, and some machinery parts remain as evidence of the operation.

No threatened or endangered plant species are known to grow in the WSA, but four Fish and Wildlife Service (FWS) candidate threatened or endangered plant species, may grow in the WSA. These are Asplenium andrewsii, Erigeron sionis, Heterotheca jonesii, and Sphaeromeria ruthiae. The known and projected habitat of these special status species extends beyond the WSA.

The endangered bald eagle and peregrine falcon may occasionally visit the WSA; both species have been sighted in the vicinity. Nesting sites of the sensitive prairie falcon and golden eagle have been reported in the WSA. The WSA has populations of cougar and bobcat, and the habitat could support desert bighorn sheep.

Other sensitive and FWS candidate threatened or endangered animal species, that may inhabit the WSA include Merriam's kangaroo rat, Virgin River montane vole, ferruginous hawk, Swainson's hawk, southern spotted owl, long-billed curlew, mountain plover, western snowy plover, western yellow-billed cuckoo, Arizona Bell's vireo, white-faced ibis, and Great Basin silverspot butterfly. Refer to Appendix

4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would not add a combination of potential natural vegetation (PNV) ecosystems not presently represented in Utah or in the NWPS. PNV is the vegetation that would develop to climax in an area if not disturbed by human interference. The WSA is in the Colorado Plateau Province/Ecoregion. The PNV in the WSA is entirely juniper-pinyon woodland (47,170 acres), a type which is represented nationally in the NWPS and in BLM study areas both in and outside of Utah, but is represented in the NWPS in Utah in only one wilderness (Box-Death Hollow in the Dixie National Forest). It also is the PNV type for the contiguous Cottonwood Point Wilderness in Arizona.

This information is summarized in Table 2, from data compiled in December 1989.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The WSA is within a 5-hour drive of Las Vegas, Nevada. Table 3 shows the number and acreage of designated wilderness areas and of other BLM study areas within a 5-hour drive of this population center.

C. Balancing the Geographic Distribution of Wilderness Areas

The Canaan Mountain WSA would not contribute significantly to balancing the geographic distribution of wilderness areas within the NWPS.

As of January, 1987, the NWPS included 65 wilderness areas comprising 2,898,792 acres in Utah, Arizona, and Nevada. Twelve designated wilderness areas are within 100 miles of the WSA.

CANAAN MOUNTAIN WILDERNESS STUDY AREA

TABLE 2
ECOSYSTEM REPRESENTATION

BAILEY-KUCHLER CLASSIFICATION (PNV)	NWPS AREAS		OTHER BLM STUDIES	
	AREAS	ACRES	AREAS	ACRES
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	11	1,401,745	84	2,095,935
UTAH (COLORADO PLATEAU PROVINCE)				
Juniper-Pinyon Woodland	1	26,000	53	1,659,028

Source: BLM File Data.

TABLE 3
WILDERNESS OPPORTUNITIES FOR RESIDENTS OF MAJOR POPULATION CENTERS

POPULATION CENTERS	NWPS AREAS		OTHER BLM STUDIES	
	AREAS	ACRES	AREA	ACRES
Las Vegas, Nevada	38	3,131,130	55	2,176,498

Source: BLM File Data.

In a clockwise direction beginning to the north are the 7,000-acre Ashdown Gorge Wilderness (Forest Service [FS]), the 26,000-acre Box-Death Hollow Wilderness (FS), the 112,000-acre Paria Canyon-Vermilion Cliffs Wilderness (BLM), the 6,860-acre Cottonwood Point Wilderness (BLM), the 70,500-acre Kanab Creek Wilderness (FS and BLM units), the 40,600-acre Saddle Mountain Wilderness (FS), the 7,880-acre Mt. Trumbull Wilderness (BLM), the 14,650-acre Mt. Logan Wilderness (BLM), the 18,630-acre Beaver Dam Mountains Wilderness (BLM), the 87,900-acre Paiute Wilderness (BLM), the 37,300-acre Grand Wash Cliffs Wilderness (BLM), and the 50,000-acre Pine Valley Mountain Wilderness (FS).

Manageability (The area must be capable of being managed effectively to preserve its wilderness character.)

All of the WSA can be effectively managed to preserve values now present in the area. In the area recommended for wilderness up to 2 acres would be disturbed by construction of a livestock trail and three spring developments, but

these developments would be designed and installed consistent with standards for wilderness protection. No additional rangeland, wildlife habitat, watershed projects, or other developments are planned in the area that would be designated. There are 71 existing mining claims in the portion of the WSA recommended as wilderness, but exploration or development are not projected in the foreseeable future. There also are 920 acres of post-FLPMA oil and gas leases. These leases are subject to the non-impairment stipulation and would not be allowed to impair wilderness quality.

Continuation of livestock grazing and maintenance of rangeland facilities as presently practiced would not significantly affect wilderness management. There are no other valid rights inside the recommended area that would threaten wilderness characteristics.

There are 3,249 acres in six sections of State land scattered throughout the WSA. Provision of reasonable access to these lands could reduce wilderness values and complicate wilderness management.

CANAAN MOUNTAIN WILDERNESS STUDY AREA

However, the need to access these lands for development is not expected in the foreseeable future.

The portion of the WSA not recommended for wilderness also could be managed for wilderness. There are mining claims and mineral leases in this portion of the WSA, but development is not expected in the foreseeable future. There are four rights-of-way for water pipelines and a canal, but maintenance would not reduce the wilderness quality of the area as a whole. Use of this part of the WSA would be administratively more difficult for BLM to manage than the recommended area because this part of the WSA is around the fringes of the unit and is more accessible to the public, including the adjacent communities.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) prepared a mineral assessment report on 32,800 acres in the Canaan Mountain WSA (USGS Bulletin 1746-A, R.E. Van Loenen, et al., 1988). The area that was investigated corresponds with the portion of the WSA that is recommended for wilderness. The area was evaluated in 1985 and 1986.

The report indicates that no identified mineral resources occur in the area that was studied. The mineral and energy potential for oil and gas is moderate, and is low for undiscovered copper, gold, lead, silver, zinc, manganese, uranium, coal, and geothermal energy. Sand, gravel, and clay in the Canaan Mountain WSA have no unique qualities that make them more valuable than the large quantities of similar materials in surrounding areas.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

Social and economic factors were not considered to be significant issues in the EIS.

Summary of WSA-Specific Public Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 91 inputs specifically addressing this WSA were received from 100 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs.

In general, 82 commenters supported wilderness designation for part or all of the WSA, while 12 commenters were opposed. Six commenters addressed the relative merits of the EIS, but took no formal position on wilderness.

Those favoring wilderness commented on special features of the WSA. The majority of those commenting in favor of wilderness were from outside the state, but there were nearly as many from urban Utah. Of particular concern was the need to protect wilderness values and to complement potential wilderness in adjacent Zion National Park.

Those opposing wilderness were concerned that wilderness would preclude water use and control and felt that the WSA lacks outstanding opportunities for primitive recreation and solitude. Most of the commenters were from rural Utah, but two were from outside the state.

Two Federal agencies, the NPS and the USBM commented on the Draft EIS. The NPS stated that either the all wilderness or partial wilderness alternatives would be compatible with Zion National Park management. The NPS noted that the all wilderness alternative would enhance and protect wilderness opportunities in the Transview Mountain area in the National Park by limiting possible ORV access.

CANAAN MOUNTAIN WILDERNESS STUDY AREA

The USBM noted that the BLM's Final EIS should include the findings of the USGS and USBM mineral investigations and those findings would be available in November 1989. These findings have been incorporated into the Final EIS and study report.

No comment letters were received on the Final EIS.

There are five sections (3,249 acres) of State land and one section (640 acres) of split-estate land with Federal surface and State minerals in the WSA. In commenting on the Draft EIS, the State of Utah expressed general opposition to wilderness designation but did not take a definite position regarding wilderness designation of the WSA. The State noted that the high quality wilderness values are all retained in the partial wilderness alternative. Wilderness management of the Canaan Mountain WSA would complement and enhance wilderness values in the adjacent Zion National Park and Cottonwood Point Wilderness. The State believes that the alternative eliminates most conflicts and that negative impacts are low. The State cites potential conflicts with an uranium resource. The State noted that oil company reports indicate moderate potential for economic accumulations of hydrocarbon reservoirs and that the Town of Hildale receives some of its public water supply from the WSA.

The Canaan Mountain WSA is in Washington and Kane Counties. The Washington County Master Plan identifies the WSA as an open space zone. The Kane County Master Plan supports the total concept of multiple use of lands and rejects wilderness as an exclusionary recreational form that cannot be used by the average recreation visitor. Both County Commissions have indicated that they do not support wilderness designation for this WSA and have endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah. In commenting on the Draft EIS, the Counties stated that this WSA includes important sources of culinary water and that wilderness designation would impede water developments. In their opinion, significant portions of the WSA do not provide outstanding op-

portunities for solitude or primitive recreation.

CANAAN MOUNTAIN WSA

Table 4
Comparative Summary of Impacts by Alternative

Alternatives		All Wilderness (47,170 Acres)	
Recommendation		No Action/No Wilderness	All Wilderness
Partial Wilderness (33,800 Acres)			
Issue Topics	Impacts on Wilderness Values	Wilderness designation would preserve wilderness values over all in the designated area which is about 72 percent of the WSA. In the nondesignated area, the same loss of wilderness values would occur as for the No Action/No Wilderness Alternative. Wilderness values would be directly lost on 309 acres and indirectly reduced in quality on up to 2,359 acres due to development of rangeland projects. Continued vehicular use of 4 miles of way would detract from opportunities for solitude and primitive recreation. Designation would be compatible with management of adjacent NPS and wilderness lands. Over the long term future, additional distribution from development of a utility corridor in Rosy Canyon would occur and an unknown amount of wilderness values would be lost.	Wilderness values would be preserved overall in the WSA. In the foreseeable future, naturalness, opportunities for solitude and primitive recreation, and scenic values would be slightly reduced in quality on 6 acres because of allowable rangeland projects. Development of the utility corridor would not occur within wilderness. Designation would be consistent with management of the adjacent Zion National Park and Cottonwood Point Wilderness.
Impacts on Vegetation	Effects would be the same as for the No Action/No Wilderness Alternative because the proposed projects and existing access routes would be in the nondesignated area.	About 1 percent (309 acres) of piñon-juniper woodland and sagebrush in the WSA would be disturbed. Threatened, endangered, or other special status plant species would not be significantly affected because sensitive areas would be avoided.	There would be no effects on vegetation because surface disturbance would be reduced. Additional protection would be provided to any special status species that may occur.
Impacts on Water Resources	Effects would be the same as for the No Action/No Wilderness Alternative because the proposed projects and existing access routes would be in the nondesignated area.	Present or future water quality and uses would not be affected because projected disturbance would be temporary and proposed water projects could be constructed.	Wilderness designation would not alter present or future water quality, but would preclude development of four proposed livestock reservoirs.
Impacts on Livestock Management	Livestock management would not be significantly affected because existing ways would remain open for use and the proposed vegetation treatment would be allowed. However, construction of two of the four proposed reservoirs would not be allowed.	Current livestock grazing would not be affected because management practices and access would remain as at present and all of the proposed livestock projects would be constructed.	Wilderness designation would inconvenience livestock operators in the area by restricting vehicular access on 4 miles of ways. The loss of the vegetation treatments and proposed reservoirs would preclude potential AUM increases and opportunities to improve livestock distribution.

CANAAN MOUNTAIN WILDERNESS STUDY AREA

Appendix
Estimated Costs of Acquisition of Non-Federal Holdings Within Areas Recommended for Designation ^a

Legal Description (Prior to any Subdivision)	Total Acreage	Number of Owners (If Parcel has been subdivided)	Type of Ownership by Estate (Federal, State, Private, Other) (Surface Estate) (Subsurface Estate)	Presently Proposed for Acquisition (Yes, No)	Preferred Method of Acquisition (Purchase, Exchange, Other)	Estimated Cost of Acquisition (Land Costs)	Estimated Cost of Acquisition (Processing Costs)
T. 42 S., R. 10 W., Sec. 32	640.00		State	No	Exchange		\$2,000
T. 43 S., R. 9.5 W., Sec. 32	221.70		State	No	Exchange		\$ 700
T. 43 S., R. 10 W., Sec. 16	640.00		State	No	Exchange		\$2,000
T. 43 S., R. 10 W., Sec. 36	466.80		State	No	Exchange		\$1,600

^a The estimated costs listed in this appendix in no way represent a Federal appraised value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estates with similar characteristics to those included in the WSA. The estimates are for purposes of establishing a range of potential costs to the government of acquiring non-Federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in this appendix.